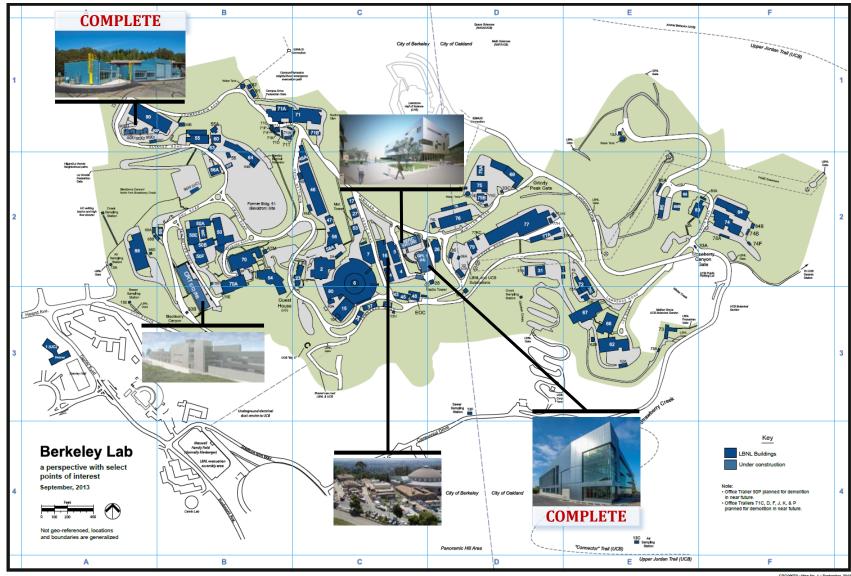


# Lawrence Berkeley National Lab Capital Projects

Presentation to Community Advisory Group
September 15, 2014

#### **Building Construction Map**





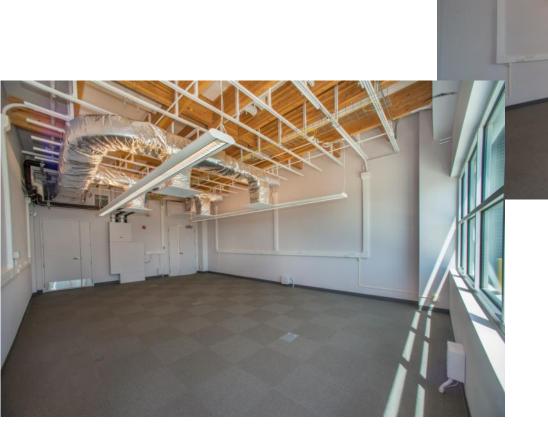
## FLEXLAB / User Test Bed Facility





#### FLEXLAB / User Test Bed Facility





#### **FLEXLAB Videos**





Time lapse construction video



Rotating testbed rotates 270 degrees



ABC7 News: Lawrence Berkeley Labs opens building efficiency test lab

#### **Building 33 General Purpose Laboratory**







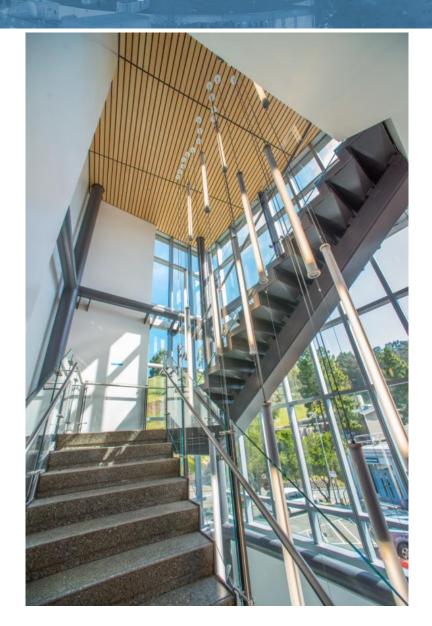
#### **Building 33 General Purpose Laboratory**





#### **Building 33 General Purpose Laboratory**







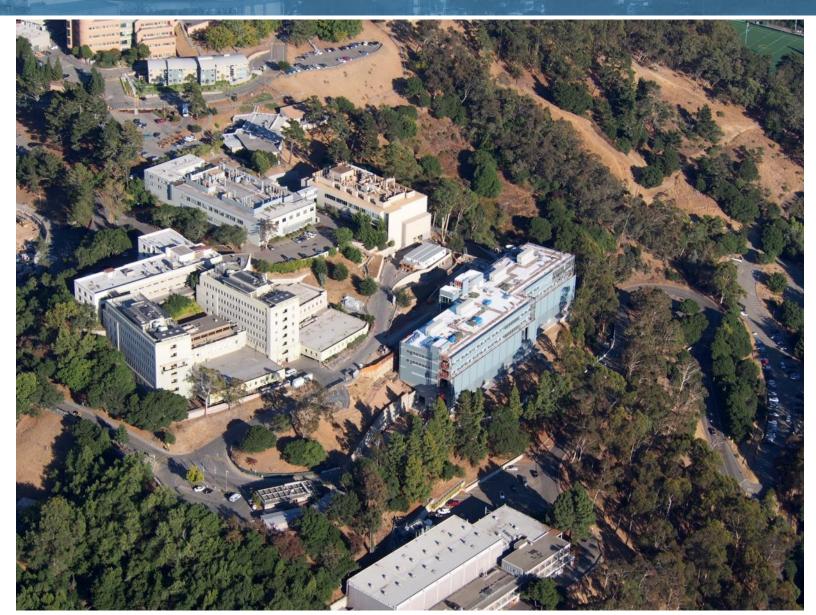


# Computational Research & Theory Facility (CRT)

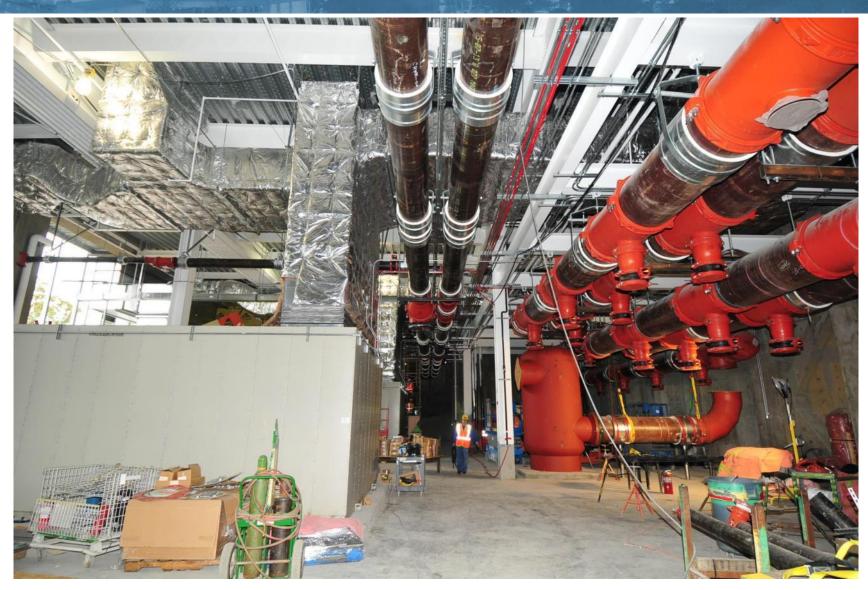








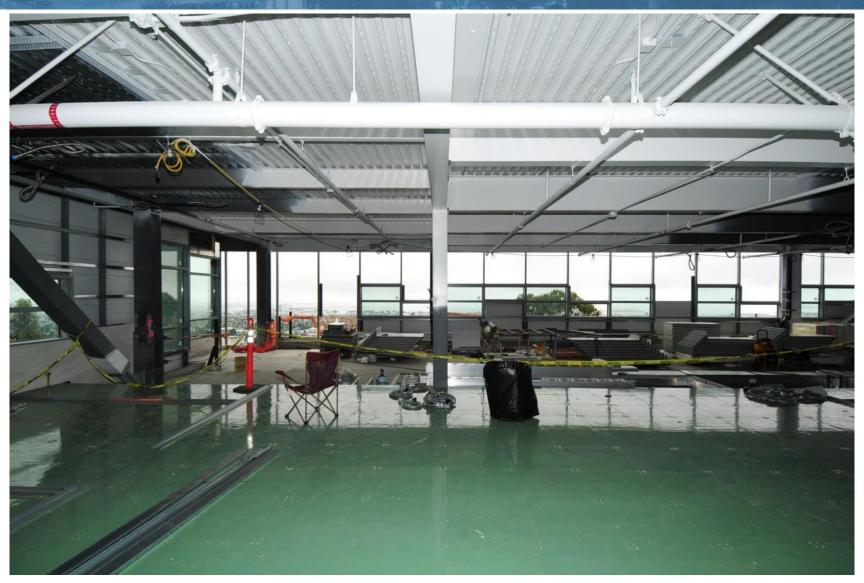










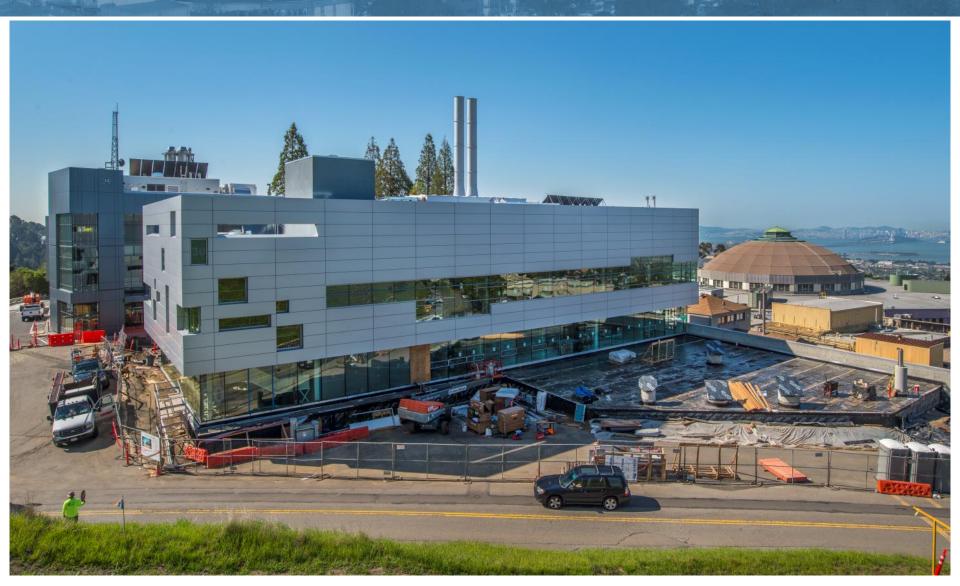


#### Solar Energy Research Center (SERC)

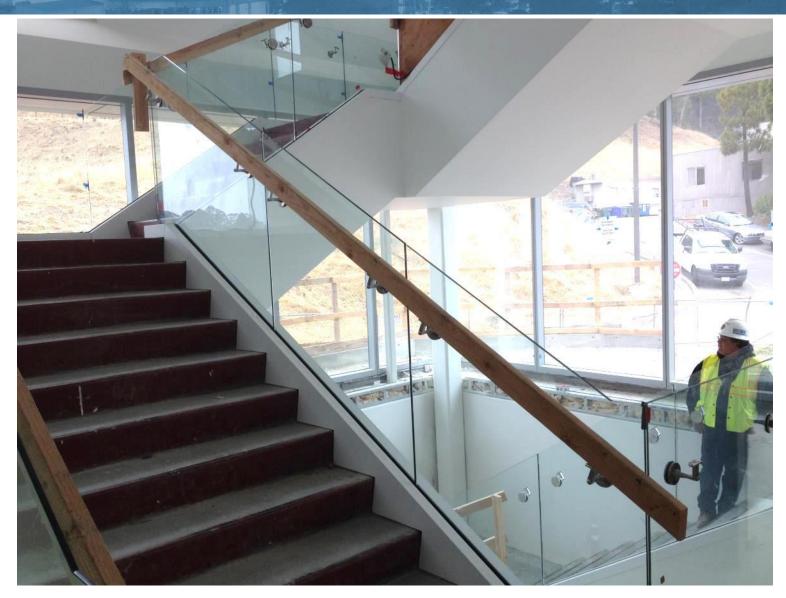




















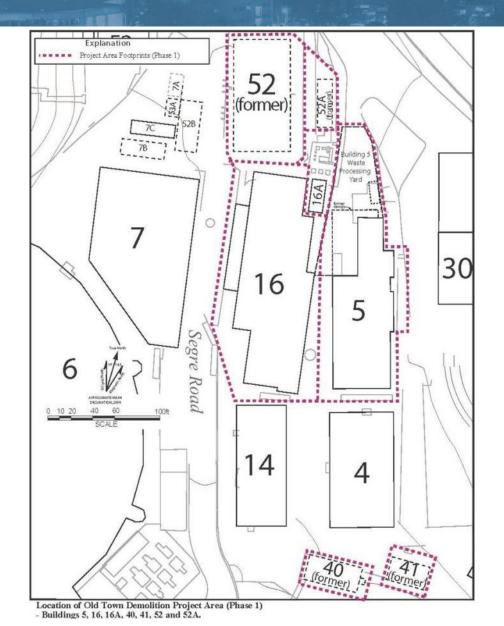
#### **Old Town Demolition (OTD)**





#### **Old Town Demolition (OTD)**











#### **Integrative Genomics Building (IGB)**





#### **IGB** – Previous Discussion



- Results of the siting selection
- Overview of 50% conceptual design
- Initial thoughts on exterior skin
- Initial environmental evaluation
- CAG Input and Q&A

#### IGB – Community Comments (last CAG)



- Impacts on hydrology
  - permeable surfaces vs. hardscape
- Population over time
- LEED status Gold+
- Diesel
  - Are there alternatives for emergency power?
- Chilled beam technology
- Level of water consumption
- Impacts on trees?
- Increase level of on-site vegetation—trees, etc. to lessen overall footprint.

#### IGB – Community Comments (last CAG)



#### **Transportation**

- Incentivize no car use
  - -get close, take a shuttle
  - Lab → UCB → Lawrence Hall →
     Botanical Garden
- Let people take shuttle down the Hill
- Traffic generation

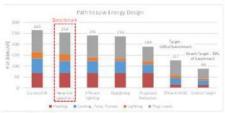


#### 3-Integrated Sustainability

**Design Drivers and Parameters** 



Preferred Solar Orientation



**Load Reductions** 

#### Passive Sustainability Approach

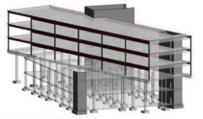
Overlay active sustainability strategies once fundamental strategies are in place



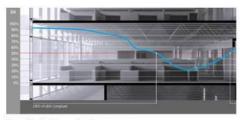
**Building Organization** 



Careful Envelope Design



Integrated Design



Daylighting Autonomy

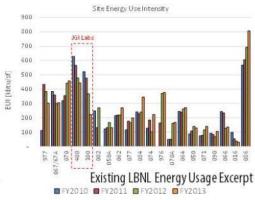
LBNL Integrative Genomics Building

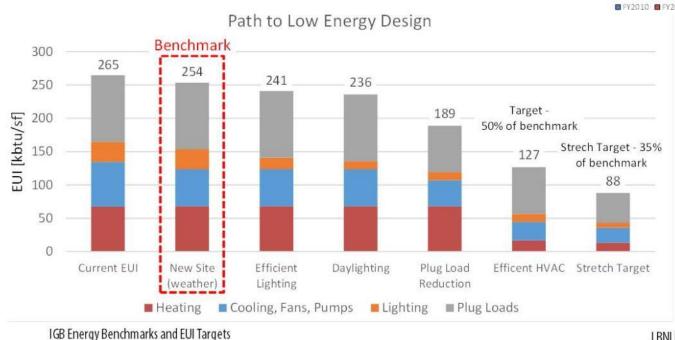
**SMITHGROUPJJR** 



#### 3-Integrated Sustainability

**Design Drivers and Parameters** 



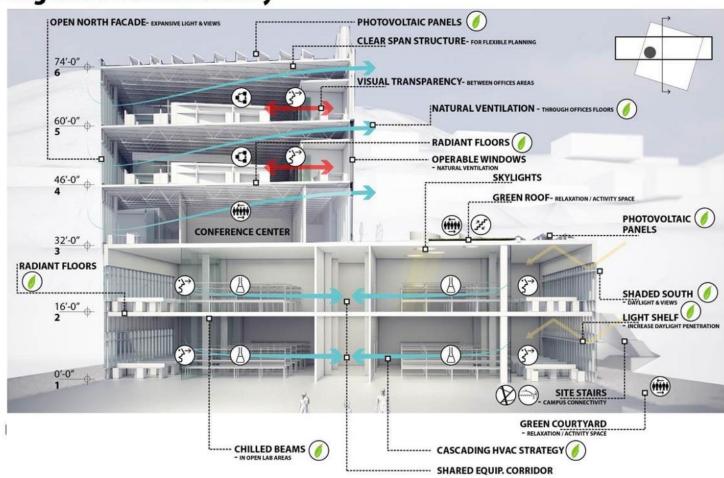


**SMITHGROUPJJR** 

LBNL Integrative Genomics Building



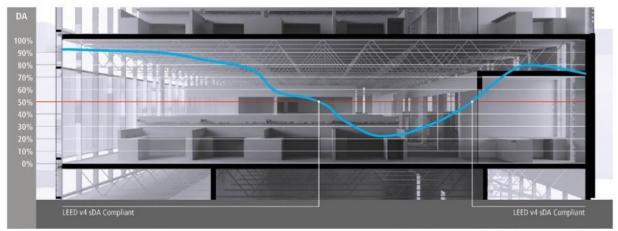
#### 3-Integrated Sustainability



**SMITHGROUPJJR** 

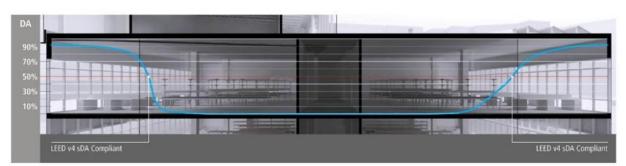


#### 3-Integrated Sustainability



Daylighting Autonomy - Levels 3-5

(71% of space exceeds Daylighting Autonomy level of 50%)

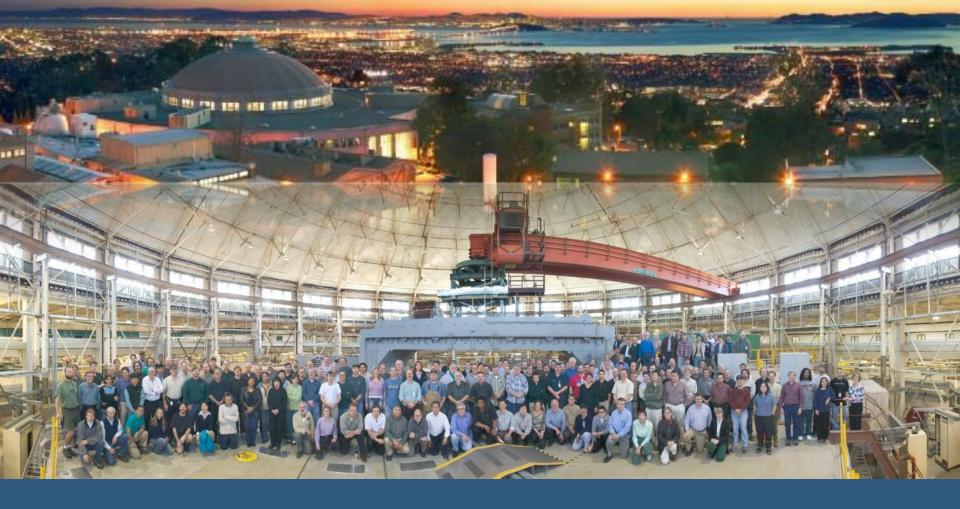


Daylighting Autonomy - Levels 1-2

(35% of space exceeds Daylighting Autonomy level of 50%)

**SMITHGROUPJJR** 

LBNL Integrative Genomics Building



### **Thank You**

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